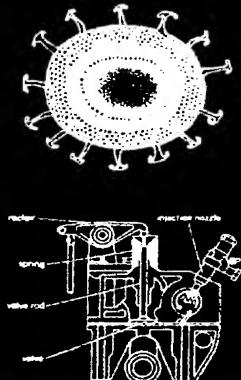


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Dictionary of Scientific and Technical Terms



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homogeneous radiation homotopy groups

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whose terms have the same total degree; equivalently it is a homogenous function of the variables involved.

homogeneous radiation [PHYS] Radiation having an extremely narrow band of frequencies, or a beam of monoenergetic particles of a single type, so that all components of the radiation are alike.

homogeneous reactor [NUCLEO] A nuclear reactor in which fissionable material and moderator (if used) are intimately mixed to form an effectively homogeneous medium for neutrons.

homogeneous space [MATH] A topological space having a group of transformations acting upon it, that is, a transformation group, where for any two points x and y some transformation from the group will send x to y .

homogenize [MET] To hold metal at a high temperature long enough to eliminate by diffusion any chemical segregation of the components.

homogenizer [MECH ENG] A machine that blends or emulsifies a substance by forcing it through fine openings against a hard surface.

homogenitase [BIOCHEM] The enzyme that catalyzes the conversion of homogenitic acid to fumaryl acetoacetate acid.

homogenitic acid [BIOCHEM] $C_6H_8O_4$. An intermediate product in the metabolism of phenylalanine and tyrosine; found in excess in persons with phenylketonuria and alkaptonuria.

homogony [BOT] Condition of having one type of flower, with stamens and pistil of uniform length.

homograph [BIO] Graft from a donor transplanted to a genetically dissimilar recipient of the same species.

homograft rejection [IMMUNOL] An immunologic process by which an individual destroys and casts off a tissue transplanted from a donor of the same species.

homoschlamydeous [BOT] Having perianth leaves alike, not differentiated into sepals and petals.

homologenetic [EMBRYO] Of a determined part of an embryo, capable of inducing formation of a similar part when grafted into an undetermined field.

Homostela [PALEON] A class of extinct echinoderms in the subphylum Homalozoa.

homolecithal [CYTOL] Referring to eggs having small amounts of evenly distributed yolk. Also known as isolecithal.

homological algebra [MATH] The study of the structure of modules, particularly by means of exact sequences; it has application to the study of a topological space via its homology groups.

homologous [BIO] Pertaining to a structural relation between parts of different organisms due to evolutionary development from the same or a corresponding part, such as the wing of a bird and the pectoral fin of a fish.

homologous serum jaundice [MED] A type of hepatitis caused by a filtrable virus that exists in the blood plasma and may be passed to another person through blood transfusion.

homologous stimulus [PHYSIO] A form of energy to which a specific sensory receptor is most sensitive.

homologous transformation [ASTRON] A mathematical transformation in the study of stellar models.

homologous tumor [MED] A neoplasm composed of tissue identical with those of the organ at the site of the tumor.

homology [ORG CHEM] That state, in a series of organic compounds that differ from each other by a CH_2 such as the methane series C_6H_{2n+2} , in which there is a similarity between the compounds in the series and a graded change of their properties.

homology group [MATH] Associated to a topological space X , one of a sequence of Abelian groups $H_n(X)$ that reflect how n -dimensional simplicial complexes can be used to fill up X and also help determine the presence of n -dimensional holes appearing in X . Also known as Betti group.

homology theory [MATH] Theory attempting to compare topological spaces and investigate their structures by determining the algebraic nature and interrelationships appearing in the various homology groups.

homolysis [CHEM] Symmetrical breaking of a covalent electron bond; for example, $A:B \sim A^+ + B^-$.

homometric pair [CRYSTAL] A pair of crystal structures whose x-ray diffraction patterns are identical.

homomorphism [BOT] Having perfect flowers consisting of only one type. [MATH] A function between two algebraic systems of the same type which preserves the algebraic operations.

homomorph [CHEM] Chemical molecules that are similar in size and shape, but not necessarily having any other characteristics in common.

Homoneura [INV ZOO] A suborder of the Lepidoptera with mandibulate mouthparts, and fore- and hindwings that are similar in shape and venation.

homonomous hemianopsia [MED] Partial blindness affecting the inner half of one field of vision or the outer half of the other; caused by optic nerve lesions posterior to the chiasma.

homopause [GEOPHYS] The level of transition between the homosphere and the heterosphere; it lies about 80 to 90 kilometers above the earth.

homopetalous [BOT] Having all petals identical.

homoplasyle [BIO] Correspondence between organs or structures in different organisms acquired as a result of evolutionary convergence or of parallel evolution.

homopolar [ELEC] 1. Electrically symmetrical. 2. Having equal distribution of charge.

homopolar bond [PHYS CHEM] A covalent bond whose total dipole moment is zero.

homopolar generator [ELECTR] A direct-current generator in which the poles presented to the armature are all of the same polarity, so that the voltage generated in active conductors has the same polarity at all times; a pure direct current is thus produced, without commutation. Also known as acyclic machine; homopolar machine; unipolar machine.

homopolar machine See homopolar generator.

homopolymer [ORG CHEM] A polymer formed from a single monomer; an example is polyethylene, formed by polymerization of ethylene.

Homoptera [INV ZOO] An order of the class Insecta including a large number of sucking insects of diverse forms.

Home sapiens [VERT ZOO] Modern human species; a large, erect, omnivorous terrestrial biped of the primate family Hominidae.

homoscedastic [STAT] 1. Pertaining to two or more distributions whose variances are equal. 2. Pertaining to a variate in a bivariate distribution whose variance is the same for all values of the other variate.

Homosclerophorida [INV ZOO] An order of primitive sponges of the class Demospongiae with a skeleton consisting of equiregular, tetraxonid, siliceous spicules.

homoserine [BIOCHEM] $C_6H_9O_3N$ An amino acid formed as an intermediate product in animals in the metabolic breakdown of cystathione to cysteine.

homosexual [BIO] Of, pertaining to, or being the same sex. [PSYCH] 1. Of, pertaining to, or exhibiting homosexuality. 2. One who practices homosexuality.

homosexuality [PSYCH] 1. State of being sexually attracted to members of the same sex. 2. A form of homoeroticism involving sexual interest without genital expression.

homosexual panic [PSYCH] An acute syndrome that comes as a climax of prolonged tension from unconscious homosexual conflicts or sometimes bisexual tendencies.

homosphere [METEOROL] The lower portion of a two-part division of the atmosphere (the upper portion is the heterosphere) according to the general homogeneity of atmospheric composition; the region in which there is no gross change in atmospheric composition, that is, all of the atmosphere from the earth's surface to about 80-100 kilometers.

homospory [BOT] Production of only one kind of asexual spore.

homothallite [MYCOL] Having genetically compatible hyphae and therefore forming zygosporangia from two branches of the same mycelium.

homotopy [MATH] Between two mappings of the same topological spaces, a continuous function representing how, in a step-by-step fashion, the image of one mapping can be continuously deformed onto the image of the other.

homotopy groups [MATH] Associated to a topological space X , the groups appearing for each positive integer n , which

homogeneous radiation homotopy groups

whose terms have the same total degree; equivalently it is a homogenous function of the variables involved.

homogeneous radiation [PHYS] Radiation having an extremely narrow band of frequencies, or a beam of monochromatic particles of a single type, so that all components of the radiation are alike.

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homolysis [CHEM] Symmetrical breaking of a covalent electron bond; for example, $A:B \rightarrow A^+ + B^-$.

homometric pair [CRYST] A pair of crystals whose x-ray diffraction patterns are identical.

homomorphism [MATH] A mapping of one system into another, such that the image of a sum is the sum of the images, and the image of a product is the product of the images.

homomorph [CHEM] An isomeric compound that has the same size and shape, but different chemical properties.

Homoneura [INV ZOO] A suborder of Diptera in which the mandibulate mouth is similar in shape to that of the homoneurous hemiptera.

homoplasious [BOT] Having the inner half of a leaf or other organ of a plant that is different from the outer half.

homopause [GEOPHYS] The time interval between the first and last kilometer above the homopause.

homopetalous [BOT] Having stamens and pistils of equal length.

homopolar [ELEC] Equal distribution of charge.

homopolar bond [CHEM] A bond between atoms in which the dipole moment is zero.

homopolar generalization [CHEM] A generalization which the poles of the molecule have the same polarity, so that it has the same polar.

homopolar produced [CHEM] Produced, without machine; homopolar.

homopolar machine [ELEC] A machine that produces homopolar current.

homopolymer [POLYM] A polymer in which the monomer is an exocyclic monomer.

Homoptera [INV ZOO] A large number of insects.

Homopterans [INV ZOO] Insects that have a large number of Homoptera.

homoscedastic [STAT] Is the variance of a bivariate distribution of data points around a regression line.

Homoscleromorpha [ZOO] Sponges of the class Homoscleromorpha.

homoseringe [BIOCHEM] An intermediate breakdown of cysteine.

homosexual [BIO] [PSYCH] One who practices homosexuality.

homosexuality [PSYCH] Practice of sexual behavior between members of the same sex.

homosexual panic [PSYCH] As a climax of prolonged conflicts of sexual orientation.

homosphere [METEOROL] The division of the atmosphere (the stratosphere) according to composition; the atmospheric layer between the earth's surface and the top of the atmosphere.

homothallism [MYCO] And therefore forming a single mycelium.

homotopy [MATH] A continuous deformation of a topological space.

homotopy groups [MATH] The groups associated with a topological space.